

NOV 28 1977

GRACE

Construction Products Division

To: D. M. Kirven

Date: November 23, 1977

From: F. W. Eaton

Subject: Early Bird Farm User Exposure
L #2 & #3 Terra-Lite Vermiculite

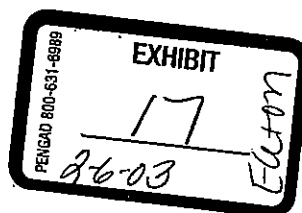
cc: J. R. Becker
R. C. Ericson
 W. R. Hanlon
 H. C. Duecker
 J. W. Wolter
 E. S. Wood
 J. C. Yang
 M. M. Williams/Travelers Rest

Results of Terra-Lite Vermiculite fiber exposure tests conducted at Early Bird Farm November 9, 1977 are as follows:

PRODUCT	SAMPLING SEQUENCE	FIBER COUNT (f/ml)			TWA 4/8
		MIN.	MAX.	AVE.	
L #2 Screened, Unbound	2	1.60	4.28	2.612	1.306
L #2 Screened, Bound	4	2.04	4.08	3.054	1.527
L #3 Screened, Unbound	1	1.83	3.42	2.463	1.231
L #3 Screened, Bound	3	2.03	3.52	2.515	1.258

NOTE:

1. Material produced at Weedsport plant November 8, 1977 2nd shift. F. Eaton was present and supervised running material.
2. All material screened over a vibrating 14 mesh screen in bagging hopper.
3. Bound material was bound with 0.5% CMC and 0.1% Pluronic at an additional rate of 0.20 qts/cf.
4. L #3 CB and Q 185041 shipped August 1, 1977, received August 12, 1977, 73.5 B/T, 19.2 #/B, 20.9% rock.
5. L #3 BN 446446 shipped October 11, 1977, received October 26, 1977, 75.8 B/T, 20.2 #/B, 14.9% rock.
6. Material delivered to Early Bird Farm October 9, 1977 am by Grace Truck.



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There's no question results are high, disappointing and bring out short comings in our efforts to screen and bind. They do not meet CPD's January 1, 1977 target of 1.0 f/ml TWA which means we should embark on a crash program to:

1. Review test procedure - is it typical of grower exposure.
2. Revise manufacturing and Q.C. procedures as a means of improving purity of expanded material.
3. Review established screening and binding procedure.
4. Conduct comparison tests, such as Simulated Attic, on same lot material.
5. Conduct monthly tests (1 test per day) at Early Bird Farm until exposures are consistently below CPD's target.
6. Continue looking at improved methods of screening and binding and new areas of improving purity of ore and expanding material.

J. C. Yang has not completed the Tremolite content determination of test material but the quantity of hand pick bundles is quite high. This indicates poor stoner setting and/or performance. The bundles vary in length from 1/8" - 5/16" for L #2 and 1/16" - 1/4" for L #3. Heavy particle determination on L #2 was high, especially sample 2 TLB. This indicates poor expansion and or poor screening. I did not have a thief to take samples at Early Bird Farm, so the sample analyzed by J. C. Yang is material from one (1) flat filled approximately mid point in a 3 CF bag.

For the record, it should be noted how and when this material was produced at Weedsport. The plant scheduled to shut down November 7, 1977 to install a belt volumetric bag filler. Minor mechanical and electrical problems carried the installation over to November 8, 1977. Prior to starting on L #2 Terra-Lite, the ore hopper, stoner and bagging hopper were cleaned out of L #1 material and waste. Prior to running test material, 10 bags were pulled and put in plant inventory. There were 20-3 CF bags run for each test although only 15 bags per test we used at Early Bird Farm. The same procedure was followed when changing from L #2 to L #3. On bound material, the binder system was flushed out, new batch mixed and addition rate calibrated.

Your comments please.


F. W. Eaton

FWE/cc

Attachment

